

5 May, 2009

MEMORANDUM

To: Division Safety Coordinators
Division Liaisons
All JHA Users

From: John Seabury
Environment, Health & Safety Division

Subject: Job Hazard Analysis – Description of Work
Discussion and Step-by-Step Instructions

One of the major features about the required FY09 annual update to Work Group and Individual Job Hazards Analyses is the “Description of Work” feature that was added in October 2008. This feature was inadvertently left off of the JHA system during development and was not added in until after the first round of JHAs had been completed. This memorandum serves to provide additional detail on the specifics required in the “Description of Work” in the JHA process, including some examples.

We anticipate that as the JHA program and tools undergo additional review in light of the recent HSS audit, some features and processes may change. However, it is not likely that fundamental change will come during the FY09 annual update cycle (ending 9/30/2009). ***The purpose of this guidance is to provide input as to where the JHAs should be now so that we can build upon these efforts in the future, and to provide examples.***

The elements of a Job Hazards Analysis parallel Integrated Safety Management:

- Define the Work (ISM Core Function #1)
- Analyze the Hazards (ISM Core Function #2)
- Determine the Controls (ISM Core Function #3)
- Perform the Work in accordance with the Controls (ISM Core Function #4)
- Review the Work and make improvements (ISM Core Function #5)

The Description of Work fits into Core Function 1 above. The balance of the JHA process fulfills Core Functions 2, 3 and 5.

Requirements

PUB-3000, Chapter 32, Section 32.c.1.a, provides the following:

“The Description of Work statement is a critical element of the JHA. This statement describes the Work objectives, locations, materials used, processes employed, equipment used, and expected outputs. The Description statement is generally on the order of a few paragraphs in length, and is of sufficient detail that the tasks can be determined by a

trained individual. The Description provides the basis for the further analysis of the tasks, hazards and controls: any Work performed and analyzed must be described in this statement.”

There are six elements that must be included in the Description:

- **Work Objectives** – what is the overall context of what this work is trying to do? This statement defines the context for the further analysis.
- **Work Locations** – where is the work performed? You can also break down the different materials and processes (see bullet below) by location if that makes sense.
- **Materials Used** – this description should be sufficiently detailed that the hazards associated with each material can be assessed. Where some members of a family of materials have unique hazards, then they should be specified (e.g., specify which types of acids are used, what are the typical compositions of welding rods employed, which hand or power tools are used, etc.)
- **Processes Employed** – the processes and techniques should be listed with sufficient detail that hazards and potential exposures of the work effort can be determined. For example, “Work with chemicals” is not specific enough, nor is “climb ladders” – neither provides enough detail to determine the hazards/exposures. Better would be “perform solvent-solvent extractions and acid-base titrations” and “climbs stepladders to reach and retrieve items up to 10 feet above the floor”. It may make sense to integrate the “Materials Used” and “Processes Employed” descriptions into one statement (e.g. “perform inert-gas arc welding on aluminum, mild carbon and stainless steels”).
- **Equipment Used** – be specific enough that hazards can be determined. Generally this means providing a list of each piece of equipment. Detail can be summarized (e.g., “vertical mill” is probably sufficient, manufacturer and model probably doesn’t add much to the description).
- **Expected Output** – what product is the result of your work effort? In the research environment where the expected output is knowledge this may be harder to describe, but when the processes and equipment produce a physical entity this will help put the work in context.

While the actual level of detail for each of these elements will vary depending upon the specific work described, all of the elements must be present and complete. ***Descriptions of Work for Work Groups need to be updated by June 30, 2009 and for Individuals by September 30, 2009.***

Examples

The Descriptions of Work below, pulled from actual JHAs, provide examples of these expectations.

1. Description of Work (from a Work Group)

This JHA Work Group covers work in 70-158, 70-120, associated staff offices, and at the Advanced Light Source. Work at the ALS is further analyzed in the approved Experiment Summary Sheet for that experiment. Work at offsite locations (e.g., UCB campus, other US synchrotron labs) is analyzed by the safety systems in use at those facilities.

70-158 is a basic research laboratory specializing in the study of the geochemistry of naturally occurring nanoparticles. This research requires the synthesis of engineered

nanoparticles that serve as analogs of natural materials, principally transition metal oxides and sulfides prepared and analyzed as suspensions in aqueous solutions.

Sample synthesis involves chemical handling, including the use of acids and bases. Oxygen-sensitive materials require handling in an anaerobic chamber under an inert (4% H₂ - N₂) atmosphere maintained by compressed gas cylinders.

Sample analysis methods performed in this laboratory include dynamic light scattering (with enclosed laser), optical absorption spectroscopy and potentiometric titration. Additional sample analyses are performed at other locations at LBNL and on campus, and include x-ray diffraction, x-ray photoelectron spectroscopy, optical fluorescence spectroscopy and x-ray synchrotron methods performed at the Advanced Light Source.

In addition, computers are used for data analysis and manuscript preparation.

Analysis: Overall, this is a pretty good Description of Work. Areas for improvement might be to describe 70-120 in the same level of detail that 70-158 is, and to provide more specifics on the exact chemical identities and concentrations of the acids and bases that are used.

- Work Objectives - good
- Work Locations – apparently complete
- Materials Used – needs improvement
- Processes Employed – needs improvement
- Equipment Used – good
- Expected Output – implicit but acceptable.

2. Description of Work (from a Work Group)

Working in laboratories 160 and 471 in Donner on basic research involving the determination of spatial 3D molecular organization of macromolecular machines in cells, tissues and microbial communities. Includes growing microbial cell cultures under aerobic and anaerobic conditions, labeling with a tag-specific reagent, followed by either chemical or cryo-fixation and subsequent workup for TEM, including water-organic solvent exchanges, resin infiltration and polymerization, sectioning and TEM analysis. Similarly, animals/tissues are fixed and subjected to TEM preparation. Chemicals handled include neutral salts, dilute acids and bases (below 0.1M) necessary to prepare buffers and nutrient media. Work also includes extensive computer work for research (3D volume reconstruction, inspection, visualization, and analysis), report, poster and presentation preparation and general communication.

Analysis: Also a pretty good description. Could be improved by detailing more specifically the equipment used to grow the cell cultures or the cryo-fix. It is unclear whether the cryo-fixation requires the use of liquid cryogen or is performed by a machine. A more complete description of the use of animals (live? organs? tissues?) would also be helpful.

- Work Objectives – good
- Work Locations – excellent
- Materials Used – needs improvement
- Processes Employed – needs improvement
- Equipment Used – needs improvement
- Expected Output – excellent

3. Description of Work (from a Work Group)

Description of the Work that this Work Group performs and to which this analysis applies: There are three main tasks associated with this JHA. One is to make cables from superconducting wire. This requires that wire is re-spoiled from the manufactures spool onto special spools that are mounted on the cabling machine. Once the spools are on the machine the wire from the spools is run over pulleys, passed though guides and around brakes prior to entering the roller assemble that deforms the wire into a rectangular. For details of the cabling machine see AHD 123 (60 STRAND EXPERIMENTAL CABLING MACHINE).

The second and third tasks requires the preparation of both metallographic samples to study the deformation of the strand due to cable and the measurement of critical properties of the wire that can change due to the cabling process. The critical current of the wire is measured at cryogenic temperatures between 4.2K and 77K.

General work objectives: There are two main objectives of this effort. One task is to take wire and fabricate rectangular cables that will be used in superconducting magnets. The other task is to characterize the cables, and the wire they are made from.

1. Work locations:

- a. Bldg. 52 and Bldg. 46*

2. Materials used

a. During cabling of wires:

- i. Wires of Cu-Nb-Sn, Cu-Nb-Ti, Bi2Sr2CaCu2O8*
- ii. Wire lubricate: RichardsApex (V-4BR) vanishing oil (hydrotreated naphtha petroleum)*
- iii. Pb-Sn solder*
- iv. Palmitic acid*

b. Materials used during critical current measurements

- i. Liquid helium, liquid nitrogen,*
- ii. Pb-Sn solder, Bi-Sn, and silver solders*
- iii. Stycast epoxy and LV24 hardener*
- iv. Solvents to clean parts and samples: Acetone and ethanol*
- v. Formic acid to remove Stycast epoxy from materials*

c. Metallographic sample preparation:

- i. Epoxy mounting material, polishing paper, and polishing compounds.*

3. Processes employed:

- a. Cryogenic testing of materials*
- b. Use of mechanical equipment to process cable*

4. Equipment used:

- a. Cabling equipment:*

- i. Wire re-spooling bench, optical micrometer, lathe, roller housing (Turks head) to deform cable, roll grinder.*
 - b. Critical current measurements:*
 - i. 15T superconducting solenoid, two 1,000 A, 10V power supplies*
 - ii. Sample mounting: soldering irons, hair driers,*
 - c. Metallographic sample preparation:*
 - i. Rotating dish polishing stations.*
5. *Expected outputs:*
- a. Rectangular (Rutherford style) cables from various wires.*
 - b. Critical current data of superconducting wire.*
 - c. Resistivity measurements of the Cu matrix of superconducting wire.*
 - d. Photographs of cable and wire cross sections.*

Analysis: Although somewhat lengthy, this is a reasonably complete Description of Work. The description of “processes employed” is at too high of a level to adequately analyze the hazards and should have some additional detail provided. A description of what is meant by “cryogenic testing of materials” is necessary. Additionally, explanation of the steps by which “mechanical equipment” is used to wind cable would help to facilitate further analysis.

- Work Objectives – excellent
- Work Locations – excellent
- Materials Used – excellent
- Processes Employed – needs improvement
- Equipment Used – excellent
- Expected Output – excellent

4. Description of Work (from an Individual JHA)

Using strong acids to prepare dilute solutions, digest samples, clean labware, and for other chemical reactions. The strong acids referred to here are the usual strong mineral acids, sulfuric, phosphoric, nitric, hydrochloric, hydrobromic, perchloric, and similar strong acids such as fluoboric, trifluoroacetic, triflic, and para-toluenesulfonic acids. This activity does not include either work with hydrofluoric acid or work with perchloric acid at temperatures above room temperature.

Analysis: An excellent description of the work activities. The listing of materials included and excluded provides a good description of the “safety envelope” defining the further analysis. However this Description of work should include a listing of work locations.

- Work Objectives – good
- Work Locations – needs improvement
- Materials Used – excellent
- Processes Employed – excellent
- Equipment Used – good
- Expected Output – good

5. Description of Work (from an Individual JHA)

All Work is described by the Work Groups above.

Analysis: This is a perfectly acceptable Individual description provided that it reflects reality. However, in this specific example, the JHA showed that the individual has a Lockout-Tagout requirement at the individual level, which meant in fact that the work was ***not*** fully "... described by the Work Groups above". The lesson here is, if additional hazardous tasks are added at the Individual level, then the Description of Work for the individual needs to support the additions.

- Work Objectives – needs improvement
- Work Locations – needs improvement
- Materials Used – needs improvement
- Processes Employed – needs improvement
- Equipment Used – needs improvement
- Expected Output – needs improvement

6. Description of Work (from an Individual JHA)

Responsible for daily coordination of hazardous waste technician team for picking up waste and managing the waste at hazardous waste handling facility including waste pick up, inspection, sampling, packaging and shipment.

Analysis: There is no discussion of work locations here – duties will differ depending upon whether the individual is at the Hazardous Waste Handling Facility or out in the field collecting waste. Also, the further analysis discusses a number of hazardous tasks (climbing ladders, working with engineered nanomaterials, driving forklifts among other), but there's nothing in this description that would logically point an analyst to those tasks. It definitely lays out the expected output via an expectation statement, but needs additional amplification.

- Work Objectives - acceptable
- Work Locations – needs improvement
- Materials Used – needs improvement
- Processes Employed – needs improvement
- Equipment Used – needs improvement
- Expected Output – good

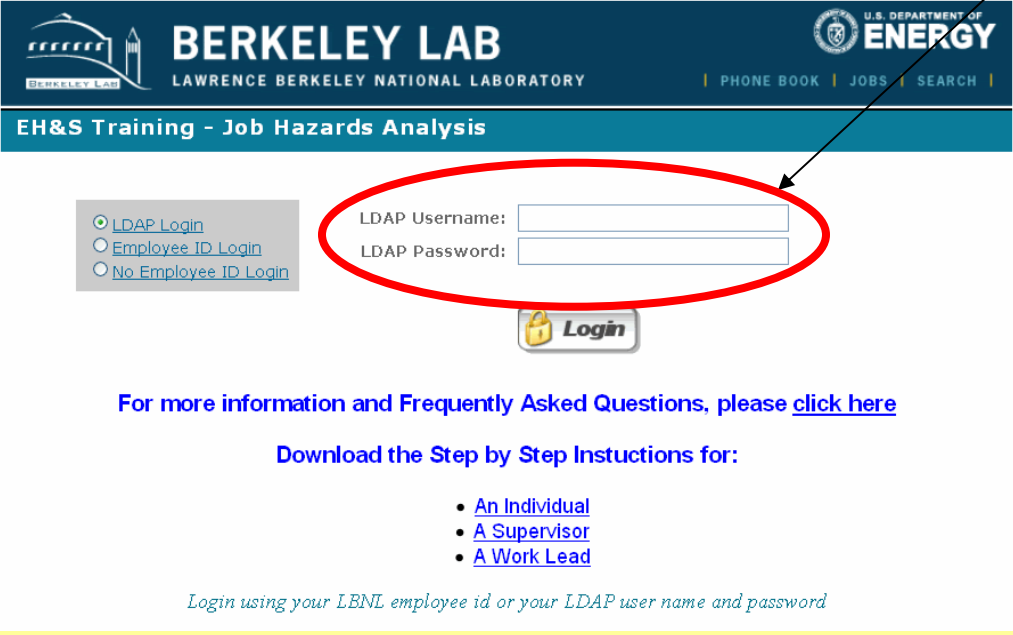
JJS/jjs

cc:

Appendix A – Step by Step Instructions

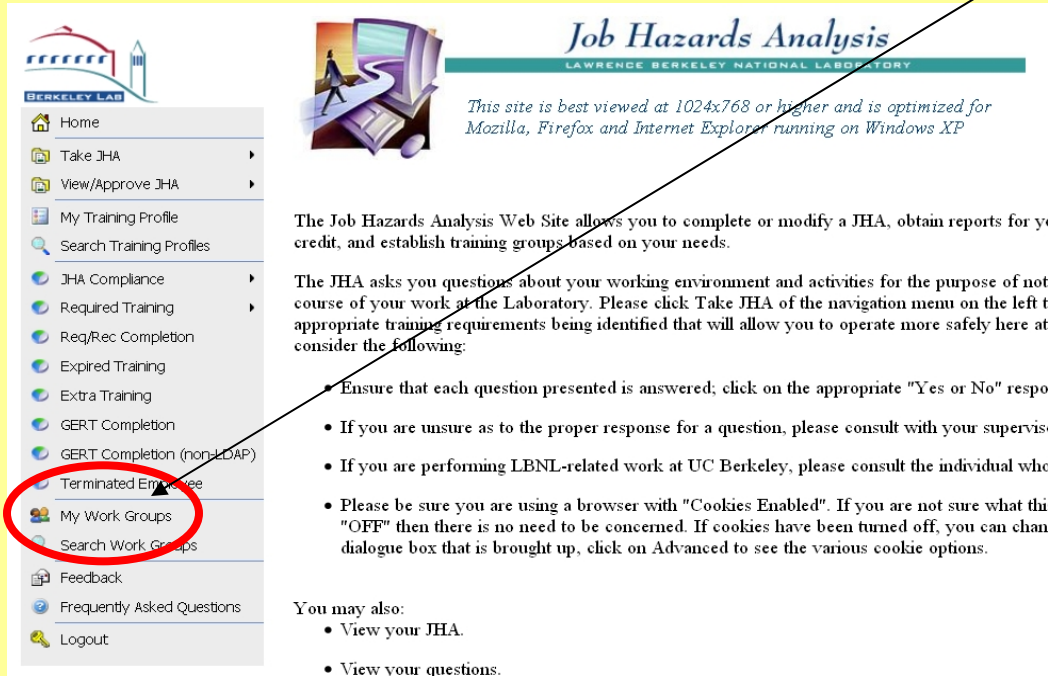
To add a Description of Work to a **Work Group**, go [here](#).

To add a Description of Work to an **Individual JHA**, go [here](#).

Part 1: Adding Description of Work to <i>Work Group Profiles</i>	Helpful Information
<p>STEP 1. Log in to the EH&S Job Hazards Analysis (JHA) system at https://ehswprod.lbl.gov/ehstraining/jha/login.aspx</p>  <p>For more information and Frequently Asked Questions, please click here</p> <p>Download the Step by Step Instructions for:</p> <ul style="list-style-type: none">• An Individual• A Supervisor• A Work Lead <p><i>Login using your LBNL employee id or your LDAP user name and password</i></p>	<p><input type="checkbox"/> Use your LDAP username and password to log in to the system</p>

Adding Description of Work to *Work Group Profiles* (continued)

STEP 2. To begin, select “My Work Groups” from the Main Menu



Job Hazards Analysis
LAWRENCE BERKELEY NATIONAL LABORATORY

This site is best viewed at 1024x768 or higher and is optimized for Mozilla, Firefox and Internet Explorer running on Windows XP

The Job Hazards Analysis Web Site allows you to complete or modify a JHA, obtain reports for your credit, and establish training groups based on your needs.

The JHA asks you questions about your working environment and activities for the purpose of not course of your work at the Laboratory. Please click Take JHA of the navigation menu on the left to appropriate training requirements being identified that will allow you to operate more safely here at consider the following:

- Ensure that each question presented is answered; click on the appropriate “Yes or No” response
- If you are unsure as to the proper response for a question, please consult with your supervisor
- If you are performing LBNL-related work at UC Berkeley, please consult the individual who
- Please be sure you are using a browser with “Cookies Enabled”. If you are not sure what this “OFF” then there is no need to be concerned. If cookies have been turned off, you can change dialogue box that is brought up, click on Advanced to see the various cookie options.

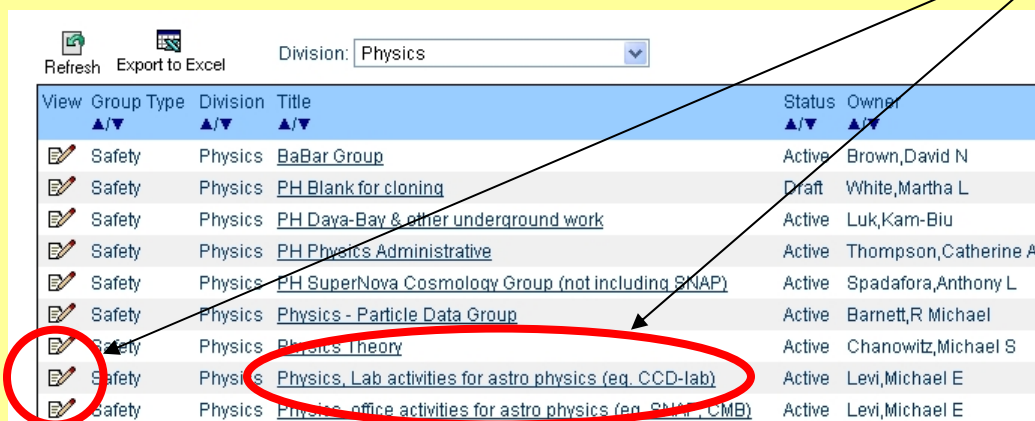
You may also:

- View your JHA.
- View your questions.

Helpful Information

- ☐ Select “My Work Groups”
- ☐ Your Main Menu may look a little different depending upon your level of access to the JHA system

STEP 3. Select a Work Group by clicking on either the name of the Work Group or on the “Edit” icon



Refresh Export to Excel Division: **Physics**

View	Group Type	Division	Title	Status	Owner
▲/▼	▲/▼	▲/▼	▲/▼	▲/▼	▲/▼
	Safety	Physics	BaBar Group	Active	Brown, David N
	Safety	Physics	PH Blank for cloning	Draft	White, Martha L
	Safety	Physics	PH Daya-Bay & other underground work	Active	Luk, Kam-Biu
	Safety	Physics	PH Physics Administrative	Active	Thompson, Catherine A
	Safety	Physics	PH SuperNova Cosmology Group (not including SNAP)	Active	Spadafora, Anthony L
	Safety	Physics	Physics - Particle Data Group	Active	Barnett, R Michael
	Safety	Physics	Physics Theory	Active	Chanowitz, Michael S
	Safety	Physics	Physics, Lab activities for astro physics (eg. CCD-lab)	Active	Levi, Michael E
	Safety	Physics	Physics, office activities for astro physics (eg. SNAP, CMB)	Active	Levi, Michael E

- ☐ Either the link at the name or the “Edit” icon will bring up the Work Group

Adding Description of Work to *Work Group Profiles* (continued)

STEP 4. On the "Define Work Group" tab, replace the red system default text with the Description of Work that is analyzed for that Work Group. Then click on the "Save" button.

Define Work Group | Assign Members | Answer Questions | View Responses | View/Edit Authorization

Group Type : ☒ Safety ☐ Qualification

* Owner : Levi, Michael E

Co-Owner : Yamato, Masaaki

Co-Owner : White, Martha L

* Division : Physics

* Title : Physics, Lab activities for astro physics (eg. CCD-lab)

Work Group Details : SNAP or CMB laboratory activities.

* Description of Work : *Replace this text with a description of the Work that this Work Group performs and to which this analysis applies. Please include the general Work objectives, locations, materials used, processes employed, equipment used, and expected outputs. It should be of sufficient detail that the tasks can be determined by a trained individual..*

* Membership Type : ☐ Rule ☒ Standard

Status : ☐ Draft ☒ Active ☐ Inactive

Save

Helpful Information

☐ Descriptions of Work must contain six elements:

- Work Objectives
- Work Locations
- Materials Used
- Processes Employed
- Equipment Used
- Expected Output

While the actual level of detail for each of these elements will vary depending upon the specific work described, all of the elements must be present and complete. There must be sufficient detail that the hazardous tasks can be determined by a trained individual. Contact your Division Safety Coordinator for assistance in developing this Description of Work.

☐ You **MUST** save the updated Description of Work information or it will be lost when you leave this tab!

Adding Description of Work to *Work Group Profiles* (continued)

STEP 5. You should also take this opportunity to review the Tasks, Hazards and Controls associated with this Work Group to be sure that they are current and complete. Do this by clicking on the "View/Edit Authorization" tab.

Task #	Description	Hazard(s)	Control(s)
1	Intensive use of desktop and/or laptop computers or terminals	Musculoskeletal discomfort or injury	EHS 0059 Ergo Self-Assessment for Computer Users (Remedy Interactive - online) Purchase Ergo chair, keyboard, mouse. Take periodic breaks to stretch or walk (e.g., 5 minute breaks each hour, or more often if fatigue is felt). Use neutral postures: straight wrist, arms/elbows at sides, and head/neck balanced over shoulders. Use keyboard shortcuts, alternate hands, and/or use alternate pointing devices to minimize mouse repetition. Adjust chair, keyboard/mouse and monitor settings to avoid awkward postures. Arrange tools for easy reach.
2	Work with sealed radioactive material under Sealed Source Authorization or Generally Licensed Source Authorization	Personal exposure to or environmental release of radioactive material	Take radiation class Use specific handling techniques and/or tools as specified in the authorization Control inventory and file inventory reports as required by the authorization
3	Working with or around hazardous commercial chemicals with known and defined hazards	Exposure or other hazards due to any use of or proximity to hazardous chemicals	EHS 0345 Chemical Hygiene for Facilities Know the hazards of materials that you work with: Consult MSDS or other sources for hazardous properties of materials including incompatibilities Store and use all materials to avoid incompatibility reactions Assure that emergency eyewash and/or safety shower are available for any use that poses an eye, face or body exposure hazard Wear lab coat, closed toed shoes, safety eyewear (e.g., safety glasses with side shields, goggles, and face shield) as appropriate Wear gloves appropriate for the material being handled (consult glove selection guide)

Helpful Information

- ☐ Open up the Hazard profile by clicking on the "View/Edit Authorization" tab.
- ☐ Switch to the "Edit" mode to make changes in the Tasks, Hazards and Controls.

Adding Description of Work to *Work Group Profiles* (continued)

STEP 6. While in the "Edit" view, changes can be made by clicking on the "Edit" icon associated with whatever it is that you want to change. Be sure to Save the changes when you're done editing.

Helpful Information

- ☐ The "Edit" icon looks like a piece of paper with a pencil on it. Each Task, Hazard or Control must be edited separately.

Define Work Group | Assign Members | Answer Questions | View Responses | View/Edit Authorization

Title: Physics, Lab activities for astro physics (eg. CCD-lab)
Status: Active

Mode: ☐ Preview ☒ Edit

Add Refresh Expand All Collapse All

Edit	Add	Delete	Task #	Task Description
			1	Intensive use of desktop and/or laptop computers or terminals

Edit	Add	Delete	Hazard #	Hazard Description
			1	Musculoskeletal discomfort or injury

Edit	Delete	Waive	Control #	Control Description	Course ID	Waived?	Reason
			1	EHS 0059 Ergo Self-Assessment for Computer Users (Remedy Interactive - online)	EHS0059		
			2	Purchase Ergo chair, keyboard, mouse.			
			3	Take periodic breaks to stretch or walk (e.g., 5 minute breaks each hour, or more often if fatigue is felt).			
			4	Use neutral postures: straight wrist, arms/elbows at sides, and head/neck balanced over shoulders.			
			5	Use keyboard shortcuts, alternate hands, and/or use alternate pointing devices to minimize mouse repetition.			
			6	Adjust chair, keyboard/mouse and monitor settings to avoid awkward postures. Arrange tools for easy reach.			

Adding Description of Work to *Work Group Profiles* (continued)

STEP 7. When you are done editing the Tasks, Hazards and Controls return to the Preview screen and save the changes you have made.

Task #	Description	Hazard	Hazard Description	Control	Control Description	Course ID	Waived?	Reason
1	Intensive use of desktop and/or laptop computers or terminals	Musculoskeletal discomfort or injury		1	EHS 0059 Ergo Self-Assessment for Computer Users (Remedy Interactive - online)	EHS0059		
2				2	Purchase Ergo chair, keyboard, mouse.			
3				3	Take periodic breaks to stretch or walk (e.g., 5 minute breaks each hour, or more often if fatigue is felt).			

Helpful Information

- ☐ Switch to the "Preview" mode after you have made changes to the Tasks, Hazards and Controls.

STEP 8. Save the changes you have made.

Task #	Description	Hazard(s)	Control(s)
1	Intensive use of desktop and/or laptop computers or terminals	Musculoskeletal discomfort or injury	EHS 0059 Ergo Self-Assessment for Computer Users (Remedy Interactive - online) Purchase Ergo chair, keyboard, mouse. Take periodic breaks to stretch or walk (e.g., 5 minute breaks each hour, or more often if fatigue is felt). Use neutral postures: straight wrist, arms/elbows at sides, and head/neck balanced over shoulders. Use keyboard shortcuts, alternate hands, and/or use alternate pointing devices to minimize mouse repetition. Adjust chair, keyboard/mouse and monitor settings to avoid awkward postures. Arrange tools for easy reach.
2	Work with sealed radioactive material under Sealed Source Authorization or Generally Licensed Source Authorization	Personal exposure to or environmental release of radioactive material	Take radiation class Use specific handling techniques and/or tools as specified in the authorization Control inventory and file inventory reports as required by the authorization
3	Working with or around hazardous commercial chemicals with known and defined hazards	Exposure to other hazards due to any use of or proximity to hazardous chemicals	EHS 0345 Chemical Hygiene for Facilities Know the hazards of materials that you work with: Consult MSDS or other sources for hazardous properties of materials including incompatibilities Store and use all materials to avoid incompatibility reactions Assure that emergency eyewash and/or safety shower are available for any use that poses an eye, face or body exposure hazard Wear lab coat, closed toed shoes, safety eyewear (e.g., safety glasses with side shields, goggles, and face shield) as appropriate Wear gloves appropriate for the material being handled (consult glove selection guide)

- ☐ Save your changes by clicking on the "Confirm Hazard Profile" button.

Adding Description of Work to *Work Group Profiles* (continued)

STEP 9. Let the members of your Work Group know that you have updated the Description of Work and the Tasks, Hazards and Controls so that they can incorporate the changes into their Individual JHA.

Helpful Information

☐ Updates to Work Groups are not automatically reflected in each Worker's JHA, he/she must import the updates.

Define Work Group
Assign Members
Answer Questions
View Responses
View/Edit Authorization

Title: Physics, Lab activities for astro physics (eg. CCD-lab)
Status: Active

Rules:

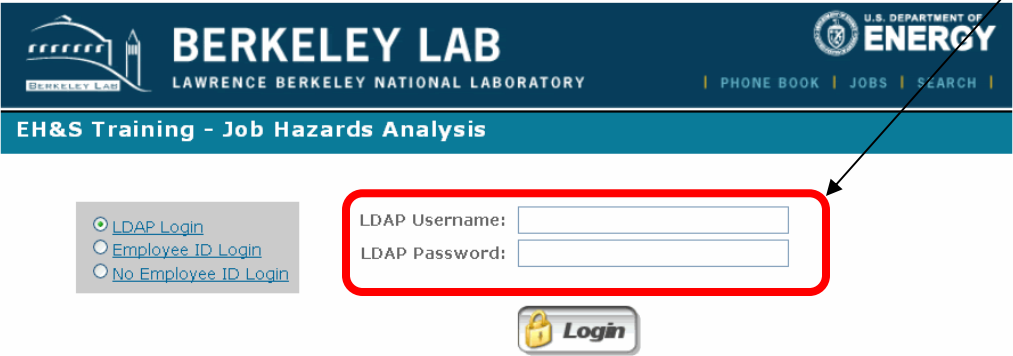
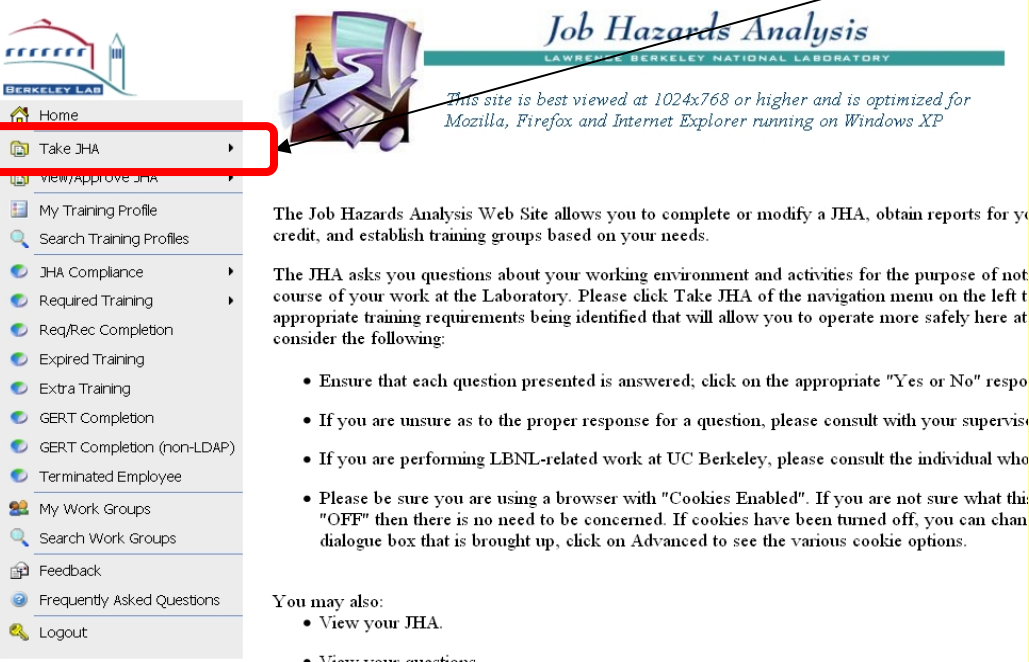
Members:

Add
 Refresh
 Export to Excel

Delete	Employee ID	Employee Name	Division	Added By	Date Added
	002287	Bebek, Christopher	PH	Bebek, Christopher	02/09/2009
	012330	Dawson, Kyle S	PH	SYSTEM	08/07/2008
	217251	Emes, John H	PH	SYSTEM	07/28/2008
	221201	Groom, Donald E	PH	SYSTEM	07/02/2008
	012694	Hennawi, Joseph F	PH	SYSTEM	09/08/2008
	800894	Irwin, Yvette M	PH	SYSTEM	05/22/2008
	013985	Jelinsky, Sharon R	PH	SYSTEM	05/22/2008
	387001	Karcher, Armin	EG	SYSTEM	05/22/2008
	489550	Kolbe, William F	PH	SYSTEM	05/22/2008
	019348	Mostek, Nick J	PH	SYSTEM	09/03/2008
	110351	Roe, Natalie A	PH	SYSTEM	08/13/2008
	017256	Thacker, Jon M	PH	SYSTEM	07/31/2008

Total Members: 12

***Repeat Steps 1-9 for each Work Group.
Then ...
You're done!***

Part 2: Adding Description of Work to <i>Individual Profiles</i>	Helpful Information
<p>STEP 1. Log in to the EH&S Job Hazards Analysis (JHA) system at https://ehswprod.lbl.gov/ehstraining/jha/login.aspx</p>  <p>For more information and Frequently Asked Questions, please click here</p> <p>Download the Step by Step Instructions for:</p> <ul style="list-style-type: none">• An Individual• A Supervisor• A Work Lead <p><i>Login using your LBNL employee id or your LDAP user name and password</i></p>	<p><input type="checkbox"/> Use your LDAP username and password to log in to the system.</p>
<p>STEP 2. To begin, select "Take JHA" "Modify Existing JHA" from the Main Menu</p>  <p>The Job Hazards Analysis Web Site allows you to complete or modify a JHA, obtain reports for your credit, and establish training groups based on your needs.</p> <p>The JHA asks you questions about your working environment and activities for the purpose of not course of your work at the Laboratory. Please click Take JHA of the navigation menu on the left to appropriate training requirements being identified that will allow you to operate more safely here at consider the following:</p> <ul style="list-style-type: none">• Ensure that each question presented is answered; click on the appropriate "Yes or No" response• If you are unsure as to the proper response for a question, please consult with your supervisor• If you are performing LBNL-related work at UC Berkeley, please consult the individual who• Please be sure you are using a browser with "Cookies Enabled". If you are not sure what this "OFF" then there is no need to be concerned. If cookies have been turned off, you can change the dialogue box that is brought up, click on Advanced to see the various cookie options. <p>You may also:</p> <ul style="list-style-type: none">• View your JHA.• View your questions.	<p><input type="checkbox"/> Select "Take JHA" "Modify Existing JHA". If you select "Create New JHA" you will overwrite anything you've put into the JHA non-selectively.</p> <p><input type="checkbox"/> Your Main Menu may look a little different depending upon your level of access to the JHA system</p>

Adding Description of Work to *Individual Profiles* (continued)

STEP 3. Click through the Work Location screen (verify that it's correct) to the JHA main page. Find the "Description of Work" field. Erase the red text and fill in your own Description of Work.

Job Hazards Analysis
LAWRENCE BERKELEY NATIONAL LABORATORY

Laboratory-wide JHA

Employee ID: [redacted] Employee Name: [redacted] Date Taken: 06/30/2008
Supervisor ID: 546850 Supervisor Name: Lucas, Donald Division: Environment, Health & Safety

Select your JHA Work Group(s):

Available JHA Groups: Administrative/Management, EH&S AHERA, EH&S Industrial Hygienists, EH&S - HSS Audit Team 2009, EHS Security Entry Gates, EHS Security Offsite, EHS Security Rover, EHS WM Certification Team Member, EHS WM Compliance Team Member, EHS WM Medical/Biological Waste Handler or Manager

Selected JHA Groups: EH&S Training Group

Add >> << Remove

Description of Work:
Replace this text with a description of the Work that you perform and to which this analysis applies. Please include the general Work objectives, locations, materials used, processes employed, equipment used, and expected outputs. It should be of sufficient detail that the tasks can be determined by a trained individual. If some of the Work is already described by Work Group description(s) you may include only those portions that are not already described. If all the Work is described by the Work Group description(s), you may delete this text and replace it with "All Work is described by the Work Groups above" or similar.

and that any other hazards to which you may be exposed are similar in nature and magnitude as those of the general public. You will not be given the opportunity to answer any additional questions. Only a "YES" answer will allow you to view other sections of the JHA addressing specific hazards.

Continue Questionnaire

Helpful Information

☐ Descriptions of Work must contain six elements:

- Work Objectives
- Work Locations
- Materials Used
- Processes Employed
- Equipment Used
- Expected Output

While the actual level of detail for each of these elements will vary depending upon the specific work described, all of the elements must be present and complete. There must be sufficient detail that the hazardous tasks can be determined by a trained individual. Contact your Division Safety Coordinator for assistance in developing this Description of Work.

If all of your Work is described in the JHA Work Groups, you may so state in the Description field.

☐ At the bottom of the page, click on the "Continue Questionnaire" button. ***If you haven't put in a Description of Work you will not be allowed to continue with the JHA process!***

STEP 4. Continue through the questions, hitting "Continue Questionnaire" at the bottom of each page. After reviewing the responses to the questions, save your work by clicking "Create Hazards Profile."

Create Hazards Profile

If you have answered incorrectly, use your browser's BACK button to correct any mistakes.

☐ The changes to your JHA will only be stored if you create a new Hazards Profile. If you leave this screen without saving your changes will be lost.

Adding Description of Work to <i>Individual Profiles</i> (continued)	Helpful Information
<p>STEP 5. Display the JHA by clicking on the link to view the “Job Hazards Analysis”.</p> <div data-bbox="94 407 1130 1192"><p><i>Job Hazards Analysis</i> LAWRENCE BERKELEY NATIONAL LABORATORY</p><p>Laboratory-wide JHA</p><p>A JHA Draft Hazards Profile has been created successfully for [redacted]</p><p>The next step is for you to discuss it <u>with your Supervisor/Work Lead</u>.</p><p>The JHA should be tailored to specifically describe the work you perform. If there are items on the Hazards Profile that do not apply to your work, your Supervisor/Work Lead can modify, waive or remove them.</p><p>After you and your Work Lead/Supervisor agree on the content of the Hazards Profile, the Supervisor/Work Lead will sign it (electronically), and you will need to countersign it (electronically) to create the active Work Authorization.</p><p>View the <u>Job Hazards Analysis</u> (JHA).</p><p>View the <u>questions</u> just taken.</p><p>View the current <u>Training Profile</u>.</p><p>NOTE: Your Training Profile will not reflect with the requirements from your JHA until you and your Supervisor/Work Lead have approved and the Work Authorization is Active.</p></div>	<p><input type="checkbox"/> Display the JHA by clicking on the link to view the “Job Hazards Analysis”.</p>

Adding Description of Work to *Individual Profiles* (continued)

STEP 6. Confirm that the Description of Work that you just wrote has been included in the “Individual” section of the JHA.

LAWRENCE BERKELEY NATIONAL LABORATORY JOB HAZARDS ANALYSIS			
Worker:		Work Lead:	Lucas,Donald (546850)
Division:	Environment, Health & Safety	Supervisor:	Lucas,Donald (546850)
Office:		Employment Date:	09/05/2006
Phone:		Job Title:	Training Specialist 2
Email:		Status:	Draft
		Approval Status:	Awaiting Supv/WL Approval
		Active Date:	
		Expiration Date:	
		JHA Number:	11472

✓ Indicates course requirement fulfilled
✗ Indicates course requirement not fulfilled - Additional training required

Group 1: EH&S Training Group (Owner DONALD LUCAS 546850)
Description of Work: Replace this text with a description of the Work that this Work Group performs and to which this analysis applies. Please include the general Work objectives, locations, materials used, processes employed, equipment used, and expected outputs. It should be of sufficient detail that the tasks can be determined by a trained individual.

Task #	Description	Hazard(s)	Control(s)
1	Intensive use of desktop and/or laptop computers	Musculoskeletal discomfort or injury	<div>✓ EHS 0059 Ergo Self-Assessment for Computer Users (Remedy Interactive - online)</div> <div>✓ EHS0058 Ergo Self Assessment-Refresher</div> <div>Take periodic breaks to stretch or walk (e.g., 5 minute breaks each hour, or more often if fatigue is felt).</div> <div>Use neutral postures: straight wrist, arms/elbows at sides, and head/neck balanced over shoulders.</div> <div>Use keyboard shortcuts, alternate hands, and/or use alternate pointing devices to minimize mouse repetition.</div> <div>Adjust chair, keyboard/mouse and monitor settings to avoid awkward postures. Arrange tools for easy reach.</div> <div>Immediately notify Supervisor of any discomfort.</div>
2	Lifting objects	Muscle strain/sprain	<div>✓ EHS 0062 WorkSmart Ergonomics</div> <div>Be sure you understand the load - assess its weight, size and balance, especially with large items (e.g., video equipment).</div> <div>Get assistance with lifting heavy and/or awkward loads</div> <div>Assure a clear path when moving loads</div>

Individual:
Description of Work: All Work is described by the Work Groups above

Task #	Description	Hazard(s)	Control(s)
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Helpful Information


- ☐ Confirm that the Description of Work that you just wrote has been included in the “Individual” section of the JHA.

Adding Description of Work to *Individual Profiles* (continued)


STEP 7. The next step is to meet with your Work Lead to go over this draft JHA and get his/her comments, changes and approval. Have your Work Lead




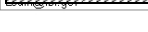
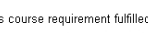
- log into the JHA system and
- open up your draft JHA from the Work Lead's "View/Approve JHA" "JHA Profiles (My Direct Reports)" buttons.

While you have the draft JHA open during the review with your Work Lead, you should update the Descriptions of Work for all of the Work Groups of which you are a member. To do so, click on the "Update Description of Work" button next to the name of each Work Group.



LAWRENCE BERKELEY NATIONAL LABORATORY
JOB HAZARDS ANALYSIS



Worker:		Work Lead:	Lucas,Donald (546850)	<input type="button" value="Approve by Work Lead"/>	<input type="button" value="Change"/>	Status:	Draft
Division:		Supervisor:	Lucas,Donald (546850)			Approval Status:	Awaiting Supv/WL Approval
Office:		Employment Date:	09/05/2006			Active Date:	
Phone:		Job Title:	Training Specialist 2			Expiration Date:	
Email:						JHA Number:	11472

✓ Indicates course requirement fulfilled
✗ Indicates course requirement not fulfilled - Additional training required

Group 1: EH&S Training Group (Owner DONALD LUCAS 546850)

Description of Work: Replace this text with a description of the Work that this Work Group performs and to which this analysis applies. Please include the general Work objectives, locations, materials used, processes employed, equipment used, and expected outputs. It should be of sufficient detail that the tasks can be determined by a trained individual.

Task #	Description	Hazard(s)	Control(s)
1	Intensive use of desktop and/or laptop computers	Musculoskeletal discomfort or injury	<input checked="" type="checkbox"/> EHS 0059 Ergo Self-Assessment for Computer Users (Remedy Interactive - online) <input checked="" type="checkbox"/> EHS0058 Ergo Self Assessment-Refresher Take periodic breaks to stretch or walk (e.g., 5 minute breaks each hour, or more often if fatigue is felt). Use neutral postures: straight wrist, arms/elbows at sides, and head/neck balanced over shoulders. Use keyboard shortcuts, alternate hands, and/or use alternate pointing devices to minimize mouse repetition. Adjust chair, keyboard/mouse and monitor settings to avoid awkward postures. Arrange tools for easy reach. Immediately notify Supervisor of any discomfort.
2	Lifting objects	Muscle strain/sprain	<input checked="" type="checkbox"/> EHS 0062 WorkSmart Ergonomics Be sure you understand the load - assess its weight, size and balance, especially with large items (e.g., video equipment). Get assistance with lifting heavy and/or awkward loads Assure a clear path when moving loads

Individual:

Description of Work: All Work is described by the Work Groups above

Task #	Description	Hazard(s)	Control(s)

Helpful Information

- ☐ See <http://www.lbl.gov/ehs/jha/pdf/WorkLeadStepbyStep.pdf> for more information on how the Work Lead accesses and approves the JHA.
- ☐ *The ability to make changes is only open to the Work Lead. You cannot make edits to your own JHA. Changes must be done by your Work Lead having signed into the system as him/her self.*

Adding Description of Work to *Individual Profiles* (continued)

STEP 8. If you need to make changes to the Work Group Descriptions to more accurately reflect your work, do so using the “Make Changes” button.

**LAWRENCE BERKELEY NATIONAL LABORATORY
JOB HAZARDS ANALYSIS**

Worker: [Redacted] Work Lead: Lucas,Donald (546850) [Approve by Work Lead] [Change] Status: Draft
Approval Status: Awaiting SupVWL Approval
Division: [Redacted] Supervisor: Lucas,Donald (546850) Active Date:
Office: [Redacted] Employment Date: 09/05/2006 Expiration Date:
Phone: [Redacted] Job Title: Training Specialist 2 JHA Number: 11472
Email: [Redacted]

✓ Indicates course requirement fulfilled
✗ Indicates course requirement not fulfilled - Additional training required

Group 1: EH&S Training Group (Owner DONALD LUCAS 546850) [Make Changes] [Update Description of Work] [Update Tasks/Hazards/Controls]

Description of Work: Replace this text with a description of the Work that this Work Group performs and to which this analysis applies. Please include the general Work objectives, locations, materials used, processes employed, equipment used, and expected outputs. It should be of sufficient detail that the tasks can be determined by a trained individual.

Task #	Description	Hazard(s)	Control(s)
1	Intensive use of desktop and/or laptop computers	Musculoskeletal discomfort or injury	<ul style="list-style-type: none">✓ EHS 0059 Ergo Self-Assessment for Computer Users (Remedy Interactive - online)✓ EHS0058 Ergo Self Assessment-RefresherTake periodic breaks to stretch or walk (e.g., 5 minute breaks each hour, or more often if fatigue is felt).Use neutral postures: straight wrist, arms/elbows at sides, and head/neck balanced over shoulders.Use keyboard shortcuts, alternate hands, and/or use alternate pointing devices to minimize mouse repetition.Adjust chair, keyboard/mouse and monitor settings to avoid awkward postures. Arrange tools for easy reach.Immediately notify Supervisor of any discomfort.
2	Lifting objects	Muscle strain/sprain	<ul style="list-style-type: none">✓ EHS 0062 WorkSmart ErgonomicsBe sure you understand the load - assess its weight, size and balance, especially with large items (e.g., video equipment).Get assistance with lifting heavy and/or awkward loadsAssure a clear path when moving loads

Individual: [Make Changes] [Update Tasks/Hazards/Controls]

Description of Work: All Work is described by the Work Groups above

Task #	Description	Hazard(s)	Control(s)
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Helpful Information

- ☐ Make changes to the newly-updated Description of Work by clicking on the “Make Changes” button.
- ☐ Clicking on the “Make Changes” button also opens up the Tasks, Hazards and Controls for that Work Group into the “Edit JHA Profile” mode. You can do this to more accurately reflect your Work. See <http://www.lbl.gov/ehs/jha/pdf/WorkLeadStepbyStep.pdf> for step-by-step instructions on how to edit Tasks, Hazards and Controls.

Adding Description of Work to *Individual Profiles* (continued)

STEP 9. Save any changes that you make.

Edit JHA Profile
LAWRENCE BERKELEY NATIONAL LABORATORY

You may add, update or delete tasks, hazards and controls to this individual JHA by clicking the appropriate icons below.

Employee Name: [Redacted] [Return to Previous View](#)

JHA Group: EHS Training Group

Description of Work: [Save](#)

Replace this text with a description of the Work that this Work Group performs and to which this analysis applies. Please include the general Work objectives, locations, materials used, processes employed, equipment used, and expected outputs. It should be of sufficient detail that the tasks can be determined by a trained individual.

[Add](#) [Refresh](#) [Expand All](#) [Collapse All](#)

Edit	Add	Delete	Task #	Task Description
			1	Intensive use of desktop and/or laptop computers

Edit	Add	Delete	Hazard #	Hazard Description
			1	Musculoskeletal discomfort or injury

Edit	Delete	Waive	Control #	Control Description	Course ID	Waived?	Reason
			1	EHS 0059 Ergo Self-Assessment for Computer Users (Remedy Interactive - online)	EHS0059		
			2	Take periodic breaks to stretch or walk (e.g., 5 minute breaks each hour, or more often if fatigue is felt).			
			3	Use neutral postures: straight wrist, arms/elbows at sides, and head/neck balanced over shoulders.			
			4	Use keyboard shortcuts, alternate hands, and/or use alternate pointing devices to minimize mouse repetition.			
			5	Adjust chair, keyboard/mouse and monitor settings to avoid awkward postures. Arrange tools for easy reach.			
			6	Immediately notify Supervisor of any discomfort.			

Helpful Information

- ☐ Be sure to “Save” any changes to the Description of Work. If you “Return to Previous View” without saving, the changes will not be stored.
- ☐ Changes made to the Tasks, Hazards and Controls are saved as part of the editing process. See <http://www.lbl.gov/ehs/jha/pdf/WorkLeadStepbyStep.pdf> for step-by-step instructions on how to edit Tasks, Hazards and Controls.

Adding Description of Work to *Individual Profiles* (continued)

STEP 10. When you and your Work Lead have finished making changes, and you two understand the Tasks, Hazards and Controls, the Work Lead signs off electronically by clicking on the “Approve by Work Lead” button. You will sign off by clicking on the “Approve by Employee” button that appears a few seconds later, AFTER the Work Lead’s approval has been stored in the JHA database.

Worker:	Work Lead:	Status:
[Redacted]	Lucas, Donald (546850)	Draft
Division:	Supervisor:	Approval Status:
Office:	Lucas, Donald (546850)	Awaiting Supv/WL Approval
Phone:	Employment Date:	Active Date:
Email:	09/05/2006	
	Job Title:	Expiration Date:
	Training Specialist 2	JHA Number:
		11472

✓ Indicates course requirement fulfilled
✗ Indicates course requirement not fulfilled - Additional training required

Group 1: EH&S Training Group (Owner DONALD LUCAS 546850) [Make Changes] [Update Description of Work] [Update Tasks/Hazards/Controls]
Description of Work: Replace this text with a description of the Work that this Work Group performs and to which this analysis applies. Please include the general Work objectives, locations, materials used, processes employed, equipment used, and expected outputs. It should be of sufficient detail that the tasks can be determined by a trained individual.

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2	Lifting objects	Muscle strain/sprain	<ul style="list-style-type: none">✓ EHS 0062 WorkSmart ErgonomicsBe sure you understand the load - assess its weight, size and balance, especially with large items (e.g., video equipment).Get assistance with lifting heavy and/or awkward loadsAssure a clear path when moving loads

Individual: [Make Changes] [Update Tasks/Hazards/Controls]
Description of Work: All Work is described by the Work Groups above

Task #	Description	Hazard(s)	Control(s)

Helpful Information

- ☐ Work Lead signs off first by clicking on the “Approve by Work Lead” button.
- ☐ A second button “Approve by Employee” appears after the Work Lead has signed off.

You're done!
Be sure to review your JHA regularly and update it at least annually, plus whenever your work changes.